QUATERNARY RESEARCH

An Interdisciplinary Journal

EDITOR:
A. L. Washburn

CO-EDITOR:
Joe S. Creager

LIBRARY USE ONLY

Volume 2, 1972

UNIVERSITY OF HAWAII LIBRARY

ACADEMIC PRESS
New York and London

Copyright © 1972 by University of Washington

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

MADE IN THE UNITED STATES OF AMERICA

CONTENTS OF VOLUME 2

Number 1, July 1972

R. I. Walcott. Past Sea Levels, Eustasy and Deformation of the Earth 1

J. H. Mercer. The Lower Boundary of the Holocene 15

Dirk Van Damme and Achilles Gautier. Molluscan Assemblages from the Late Cenozoic of the Lower Omo Basin, Ethiopia 25

James P. Kennett and Paul Huddlestun. Late Pleistocene Paleoclimatology, Foraminiferal Biostratigraphy and Tephrochronology, Western Gulf of Mexico 38

Thompson Webb III and Reid A. Bryson. Late- and Postglacial Climatic Change in the Northern Midwest, USA: Quantitative Estimates Derived from Fossil Pollen Spectra by Multivariate Statistical Analysis 70

Note

H. H. Lamb. Atmospheric Circulation During the Last Ice Age—A Discussion: Reply 116

Book Reviews 117

Number 2, September 1972

David M. Hopkins, Robert W. Rowland, and William W. Patton, Jr. Middle Pleistocene Mollusks from St. Lawrence Island and Their Significance for the Paleo-Oceanography of the Bering Sea 119

Richard G. Klein. The Late Quaternary Mammalian Fauna of Nelson Bay Cave (Cape Province, South Africa): Its Implications for Megafaunal Extinctions and Environmental and Cultural Change 135

Karl W. Butzer and David M. Helgren. Late Cenozoic Evolution of the Cape Coast Between Knysna and Cape St. Francis, South Africa 143

John E. Guilday and Paul W. Parmalee. Quaternary Periglacial Records of Voles of the Genus *Phenacomys* Merriam (Cricetidae: Rodentia) 170

Allan C. Ashworth, Lee Clayton, and William B. Bickley. The Mosbeck Site: a Paleoenvironmental Interpretation of the Late Quaternary History of Lake Agassiz Based on Fossil Insect and Mollusk Remains 176

Calvin J. Heusser. Palynology and Phytogeographical Significance of a Late-Pleistocene Refugium Near Kalaloch, Washington 189

Linda E. Florer. Quaternary Paleoecology and Stratigraphy of the Sea Cliffs, Western Olympic Peninsula, Washington 202

Eberhard Grüger. Late Quaternary Vegetation Development in South-Central Illinois .. 217

Ronald C. Flemal, I. Edgar Odom, and Ronald G. Vail. Stratigraphy and Origin of the Paha Topography of Northwestern Illinois 232

John Chappell and Henry A. Polach. Some Effects of Partial Recrystallisation on ^{14}C Dating Late Pleistocene Corals and Molluscs 244

R. D. Lorrain and R. A. Souchez. Sorption as a Factor in the Transport of Major Cations by Meltwaters from an Alpine Glacier 253

Book Reviews 257

CONTENTS OF VOLUME 2

NUMBER 3, NOVEMBER 1972

I. GUEST EDITORIAL

J. KUKLA, R. K. MATTHEWS, AND J. M. MITCHELL, JR. The End of the Present Interglacial 261

II. THE PRESENT INTERGLACIAL IN THE QUATERNARY PERSPECTIVE

CESARE EMILIANI. Quaternary Hypsithermals 270

HERBERT E. WRIGHT, JR. Interglacial and Postglacial Climates: The Pollen Record .. 274

RHODES W. FAIRBRIDGE. Climatology of a Glacial Cycle 283

J. T. ANDREWS, R. G. BARRY, R. S. BRADLEY, G. H. MILLER, AND L. D. WILLIAMS. Past and Present Glaciological Responses to Climate in Eastern Baffin Island .. 303

GERALD M. RICHMOND. Appraisal of the Future Climate of the Holocene in the Rocky Mountains 315

LLOYD H. BURCKLE. Diatom Evidence Bearing on the Holocene in the South Atlantic 323

VOJEN LOŽEK. Holocene Interglacial in Central Europe and its Land Snails 327

ADOLF ABSOLON. Freshwater Ostracods in Holocene Cycle 335

C. BERTRAND SCHULTZ. Holocene Interglacial Migrations of Mammals and Other Vertebrates 337

NILS-AXEL MÖRNER. When Will the Present Interglacial End? 341

III. RAPID CHANGE OF ENVIRONMENTS FOLLOWING THE PAST INTERGLACIAL

ANDREW MCINTYRE AND WILLIAM F. RUDDIMAN. Northeast Atlantic Post-Eemian Paleooceanography: a Predictive Analog of the Future 350

JAMES D. HAYS AND ALBERT PERRUZZA. The Significance of Calcium Carbonate Oscillations in Eastern Equatorial Atlantic Deep-Sea Sediments for the End of the Holocene Warm Interval 355

CONSTANCE SANCETTA, JOHN IMBRIE, N. G. KIPP, ANDREW MCINTYRE, AND W. F. RUDDIMAN. Climatic Record in North Atlantic Deep-Sea Core V23–82: Comparison of the Last and Present Interglacials Based on Quantitative Time Series ... 363

R. K. MATTHEWS. Dynamics of the Ocean-Cryosphere System: Barbados Data 368

GEORGE J. KUKLA AND ALOIS KOČÍ. End of the Last Interglacial in the Loess Record 374

JAMES P. KENNETT AND PAUL HUDDLESTUN. Abrupt Climatic Change at 90,000 Yr BP: Faunal Evidence from Gulf of Mexico Cores 384

W. DANSGAARD, S. J. JOHNSEN, H. B. CLAUSEN, AND C. C. LANGWAY. Speculation about the Next Glaciation 396

IV. ON THE CAUSES OF GLACIALS AND INTERGLACIALS: NATURAL CAUSES AND THE FUTURE IMPACT OF MAN

PETER K. WEYL. The Salinity of the North Atlantic Ocean and the Next Glaciation .. 399

JOHN T. HOLLIN. Interglacial Climates and Antarctic Ice Surges 401

MINZE STUIVER. On Climatic Changes 409

George J. Kukla and Helena J. Kukla. Insolation Regime of Interglacials 412
Stephen H. Schneider. Atmospheric Particles and Climate: can we Evaluate the Impact of Man's Activities? 425
J. Murray Mitchell, Jr. The Natural Breakdown of the Present Interglacial and its Possible Intervention by Human Activities 436

Number 4, December 1972

C. Wylie Poag. Correlation of Early Quaternary Events in the U.S. Gulf Coast 447
Roy F. Spalding and Thomas D. Mathews. Stalagmites from Caves in the Bahamas: Indicators of Low Sea Level Stand 470
Bruce G. Gladfelter. Pleistocene Terraces of the Alto Henares (Guadalajara), Spain .. 473
H. D. Tjia, Shoji Fujii, Kunihiko Kigoshi, Arata Sugimura, and Thomas Zakaria. Radiocarbon Dates of Elevated Shorelines, Indonesia and Malaysia. Part 1 487
Gurdip Singh, R. D. Joshi, and A. B. Singh. Stratigraphic and Radiocarbon Evidence for the Age and Development of Three Salt Lake Deposits in Rajasthan, India 496
Jean A. Maxwell and Margaret Bryan Davis. Pollen Evidence of Pleistocene and Holocene Vegetation on the Allegheny Plateau, Maryland 506
Louis J. Maher, Jr. Absolute Pollen Diagram of Redrock Lake, Boulder County, Colorado 531
Glen A. Izett, Ray E. Wilcox, and Glenn A. Borchardt. Correlation of a Volcanic Ash Bed in Pleistocene Deposits near Mount Blanco, Texas, with the Guaje Pumice Bed of the Jemez Mountains, New Mexico 554
A. B. Costin. Carbon-14 Dates from the Snowy Mountain Area, Southeastern Australia, and Their Interpretation 579
Notes
Irwin Rovner. Note on a Safer Procedure for Opal Phytolith Extraction 591
Karl W. Butzer. Molluscan Assemblages from the Late Cenozoic of the Lower Omo Basin, Ethiopia—Comments 591
Letter to the Editors 593
Author Index 594
Subject Index 595

Digitized by the Internet Archive
in 2026

https://archive.org/details/quaternary-research_1972_2_contents

QUATERNARY RESEARCH

An Interdisciplinary Journal

EDITORIAL POLICY

ternary Research is devoted to *interdisciplinary* articles dealing with the Quaternary Period. Edi- policy requires that articles must be of broad interest, of basic significance to more than one disci- and of high merit. Previously unpublished research results, comprehensive reviews of a field of edge, and occasional English translations of outstanding articles in other languages will all be con- d. Generally, articles should be in English, but a small proportion of articles in French, German, ssian will be accepted. Articles should not exceed 5000 words, but exceptions can be made for ally significant contributions. All articles will be reviewed by at least two referees.

nuscripts and figures should be submitted at least in duplicate (a third copy could speed processing) to:

Quaternary Research
Editorial Office
University of Washington
Seattle, Washington 98105

INSTRUCTIONS TO AUTHORS

General Instructions

nuscripts should be written in clear and concise English and should conform to the general style e journal and the specific instructions listed below. Manuscripts that are not adequately prepared oe returned to the authors, since it is not feasible for the Editors to revise or rewrite manuscripts. ibutors, particularly those unfamiliar with English usage, are encouraged to seek the help of col- es in the preparation and review of manuscripts prior to submission. This practice reduces the time ed for review and avoids delays in publication.

rm and Style. Manuscripts should be concise but detailed enough to permit critical appraisal. They d be typewritten and double-spaced throughout (including tables, legends, and footnotes) on one of approximately 22- × 28-cm (8.5- × 11-in.) paper with 2.5-cm (1-in.) margins. Tables and legends should be typed separately and placed at the end of the manuscript. All pages, beginning the title page and including tables and figure legends, should be numbered consecutively and ed securely. The title page should include the article title, author(s), affiliation(s) and address(es), suggestions for index entries. Addresses should include zip codes or postal districts when applicable. orrespondence regarding the manuscript will be made with the person submitting the manuscript.

thors are requested to include an Abstract (50-200 words, typed on a separate page following the page). The Abstract should be a concise and informative summary that can be copied verbatim bliographies. The title must be suitable for indexing.

its. Metric units should be used throughout, with English equivalents in parentheses if originally in English units. When used in conjunction with numerals, units should be abbreviated and uated (e.g., cm, g, %). Use the American Chemical Society Handbook as a guide.

otnotes. Footnotes in the *text* should be identified by superscripts consisting of Arabic numerals should be typed on a separate sheet; footnotes in the *tables* should be identified by superscripts sting of the lower-case letters a, b, c, etc., and placed at the bottom of the table.

bles. Tables should be denoted by Arabic numerals and be cited consecutively in the text. Each should be titled and typed double-spaced on a separate sheet. *Units must be clearly indicated for of the column entries in the table.*

gures. All figures should be denoted by Arabic numerals and cited consecutively in the text, with e legends typed on a separate sheet. Units should be clearly indicated in the figures themselves.

ease Note: All figures are to be submitted in such form as to permit photographic reproduc- without retouching or redrawing, including the lettering. Lettering is reproduced as part of the engraving and is not set in type. Line drawings should be carefully drafted with black India on white drawing paper or blue drafting cloth, if possible no larger than 22- × 28-cm (8.5- × 11-in.) all. The lettering should be large enough to allow a 50% reduction. High-quality glossy prints are table for drawings and required for photographs. Colored reproductions (either photographs or) cannot be accommodated unless financed by the author.

ferences. References should be cited in the next by author's surname and date such as "Doe (1970) rted that . . ." ". . . as previously reported (Doe *et al.*, 1970)." Suffixes (a, b, etc.) should be to distinguish two or more works by the same author(s) in the same year; *e.g.*, Doe (1971a, 1971b).

Page numbers should be given whenever practicable. A direct quotation should always be pag referenced; a paraphrased statement should be page referenced if the article exceeds 10 pages. The referen section should be arranged alphabetically according to the author's surname. Order of items: author(s date of publication, title of article, journal or book title (written out in full rather than abbreviated volume number, inclusive pages and (for books only) publisher and city, e.g.:

Doe, J. (1971a). The problem of Quaternary climatic changes. *Quaternary Research* **1**, 1–10.

Doe, J., and Doe, J. (1972). "The Cause of Quaternary Climatic Changes." Vol. 1. Academic Pres New York.

Cohen, R. (1967). The equatorial ionosphere. *In* "Physics of Geomagnetic Phenomena." (S. Matsushit and W. H. Campbell, Eds.), Vol. 1, pp. 561–613. Academic Press, New York.

Author's alterations in excess of 10% of the cost of composition will be charged to the author.

Reprints. 50 reprints of each article will be supplied free of charge. Additional reprints can be ordere on the form accompanying galley proof.